DEVELOPING COMMUNITY SCHOOLS THROUGH THE COLOCATION OF RESOURCES IN EL PASO, TEXAS

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INTRODUCTION

The contemporary school system is the subject of much debate across the United States. Public consciousness paints public schools as ineffective, uninspiring and inadequate. Educational theory focuses on ways to change the curriculum that will best aid students. This method of problem solving has its merits, but the social theory of education states that education is a function of broader systems.

Schools began to have a larger building footprint in the late 1950s. The initial shift towards bigger schools was intended to account for a greater provision of community resources. School sprawl is used to describe the practice of locating schools on large campuses away from the residential areas they serve. Contemporary thought has proposed a move back to the community school as a solution to this fragmentation (McDonald 2010).

This paper engages with existing literature to covering the colocation framework an existing policy, including experienced benefits and challenges. It goes on to perform an analysis of compatible uses and propose recommendations.

Literature Review

DEFINITIONS

Colocation is the practice of siting multiple, usually civic, uses on the same parcel or development. Colocation can occur in varying degrees and include a variety of uses. Examples range from schools which allow community members to reserve sports fields to urban schools located within an office building.

A fully integrated civic use school facility requires a lot of planning and coordination. The most effective solution to implementing a colocation strategy is to create a joint use agreement. Joint use agreements are legislative action intended to expand and incentivize the multi-use of school facilities (Dorn 2010).

Joint use can be defined as an agreement between a district and another entity where facilities, land, utilities, or other common elements are shared between two or more parties on site. However, joint use is a fairly flexible term and the details can vary from locality to locality. The specific definition of joint use can have an impact on how a joint use program or facility is funded or administered. Local entities may pursue joint use partnerships for many reasons including the availability of state-level joint use funding, realizing construction or operational cost savings, and school board philosophy or direction (Dorn 2010).

Joint use agreements should cover a few key policy considerations. If the agreement is being considered beyond a single school, the responsible entity will need to determine whether joint use is a mandatory program. If not, there may need to be incentives for participation. An agreement at any level should cover, at minimum, the intended financing structure, ownership, and allowable uses (Dorn 2010).

A community school is another variation on the colocation framework. It describes a collaborative effort between school districts and other agencies to provide comprehensive and connected services that are mutually beneficial to accomplishing each organization's mission for utilizing the schools. The goal is to build a stronger community through multiuse schools. A community school is defined by the idea that the school serves the community at large, not just enrolled students (Dorn 2010).

EXISTING CONDITIONS

Colocation planning can be considered a "wicked problem," where the problem is agreed upon, but the solution is not. School systems interface with nearly all other aspect of planning and colocation necessitate the consideration of many interconnected systems. Navigating the different services, providers, and users can be difficult, if not impossible. In this way, it is a true "wicked problem" where decisions made in one area may have unforeseen consequences in another area. One solution is to assess colocation through a cost-benefit analysis. This looks not just at financial outcomes like operational savings, but also at educational and social outcomes (Zolnik et al. 2010).

School sprawl happens when districts site new school facilities on the fringes of the community, usually on land granted by developers. These new facilities are often consolidated schools, which serve bigger populations of students in an effort to reduce operating costs (McMahon 2000).

Like the closely related trend of urban sprawl, there are many documented downsides to this approach. The distance between the school and the edge of its attendance boundary tends to be too far to walk. Less walkable schools can have negative public health impacts. Low walkability creates secondary environmental concerns as many parents have to drive children to school. School districts also bus in pupils, further exacerbating emission concerns (McMahon 2000).

Then there is the sheer distance, leading to an inevitable disconnect between the school and the community, especially since larger schools may be serving multiple communities. The consolidation of multiple attendance zones may have equity impacts on the provision of service, both because the school is not in the community it serves, and because resources are split (McMahon 2000).

School facilities, like gyms, athletic fields, and libraries are useful to the surrounding community and are often duplicative of other community infrastructure. Community facilities can be useful for the school system, yet few schools and communities enter into shared use agreements. Physical separation of community centers and schools has led to decreased engagement of the two institutions (Studio 2014)

The major argument in favor of consolidated schools is that a larger school can offer a greater variety of classes and activities. While this may be true, the bulk of education research has shown that small schools produce better outcomes. They have higher attendance and extracurricular participation, increased parent involvement, and result in overall student achievement gains. Crucially, community schools act as a social capital resource for the entire neighborhood, extending their impact beyond enrolled students (McMahon 2000).

Since the driving force behind consolidated schools is economies of scale, it is worth pointing out that there are financial benefits to colocation that can alleviate some of the cost burden associated with community schools. In the current economic climate, school districts, local governments and the communities they serve are faced with difficult decisions and obstacles centered on maintaining programs and facilities. School districts primarily raise funds through bonds and levies, which are scrutinized by the community, especially in the current economic climate (Dorn 2010).

Community schools offer an opportunity to reduce infrastructure costs and bring the community on board with expenditures. There is a general lack of understanding by school and community officials and a process of how community schools can be formed to enhance and support education and strengthen neighborhoods. Identifying mutual benefits that could be experienced by people and entities within the community helps to build consensus for the idea and implementation. Community schools can help address other barriers like poverty, mobility, and the lack of support for family health and welfare (Dorn 2010).

School locating involves looking at the relationship between the built environment and land use. Factors like walkability, transportation, development patterns, and housing stock can all play a role in the school district's decision to place a school. The current siting process has a few institutional obstacles that may hinder colocation opportunities. Acreage and square footage requirements can prohibit infill development. Developers will often offer school districts free land as an incentive to locate on their project. The reduced cost can lead to district prioritization of new buildings rather than redevelopment. This further encourages schools to locate in areas with ongoing development and new construction (Vincent 2006).

Districts partially obtain funds through property taxes. Theory has shown that higher performing schools tend to be in higher property value areas. While this is due to a variety of systemic equity and access issues, this link can exacerbate the infrastructure disconnect by creating a false positive that high property values equal better schools. A solution for smaller, infill, or lower value schools may be to reduce capital outlays through collaboration with civic bodies. This can free up resources for improving education provision and comes with benefits to the community (McKoy and Vincent 2005).

This potential solution is complicated by the fact that there is often a disconnect between school districts and civic organizations. A lack of information sharing can exacerbate problems

because both governing bodies are acting without consultation. Isolation of schools from civic institutions can lead to loss or duplication of resources. Colocation can only work in a joint policy strategy context (Vincent 2006).

Acreage requirements vary by state and school district, but the Council of Educational Facility Planners suggests these general allocations:

- Elementary School 10 acres plus 1 acre per 100 students
- Middle School 20 acres + 1 acre/100 students
- High School 30 acres + 1 acre/100 students

The second part of the formula is meant to calculate the appropriate amount of classroom space based on enrollment. The ratio is often higher as school districts account for growth. The first portion gives a set acreage requirement for the provision of support services like administrative offices and of academic-adjacent functions like libraries, computer labs, cafeterias, and athletic facilities (McMahon 2000).

Colocation encourages flexibility in this formula and in site planning by segmenting these functions. By looking at services separate from instructional space, the overall footprint can be reduced. This can look like building one combination library facility instead of one facility for the school and one facility for the community. Separating out the uses within educational facilities can also help to clarify funding streams and get a better sense of where colocation can supplement funding (Vincent 2006).

Colocation provides an opportunity to develop site more like a campus, with certain areas more accessible to the public depending on usage. Colocation can also apply to siting different grade level schools together and sharing resources that way.

IMPLEMENTATION

Predictors of successful community school projects based on the body of research suggest that there are a few recommended guidelines for implementation. A smaller population (less than 10,000) is the best case for implementation. At this scale, coordination is easiest and the greatest benefit to the community can be felt. The site should be connected with a larger network, regional system, or consortium. An integrated facility is preferred, and it should accommodate a variety of groups and resources (Haycock 2006).

During the planning process, stakeholder and community involvement is key. Getting buy in is the only way to ensure that the project will succeed. Involve parties should draw up a written legal agreement for governance, administration, finances, and operations. To reduce confusion and maintain integration, all users will report to a single, independent, representative decision-making board or management committee (Haycock 2006).

Communication and circulation are vital to success. Regular discussion of effective communication at all levels and planned cooperation between civic staff and school staff. There should be no restrictions on access to print, audio/video, or electronic resources or other materials (Haycock 2006).

One policy approach is mandated collaborative school planning. Lees et al. assessed Florida S.B. 1906, a piece of legislation passed in 2006 intended to integrate local land use and school facility planning (2008). The bill required local government and county school boards to adopt interlocal agreements.

The legislation led to key collaboration efforts between governing bodies. Coordination and information sharing helps form cohesive policy looking at population and enrollment projections, land development trends and school facilities planning. Local government was given access and input on district facilities plans and school siting. In return, school districts joined rezoning and

comprehensive plan processes. The legislated communication facilitated the colocation of resources and helped build framework for dispute resolution (Lees et al. 2008).

Lees finds that a concurrency requirement is vital to success. Districts and local governments should share information as it become known or policy efforts lose effectiveness. The state bill lacks monitoring and enforcement provisions, meaning that outcomes vary by locality. The last finding was a demonstrable increase in joint use projects including parks, swimming pools, athletic fields (Lees et al. 2008).

School sprawl leads to a disconnect between the school and the surrounding neighborhood. New facilities often have massive campuses that create a spatial disconnect with the surrounding area. A study out of Northern Ireland looks at nine community school implementations to address the fragmentation that accompanies sprawl. The most successful colocation studies are international because school governance and funding structures tend to be less independent than the structure of the American school system (Karayiannis 2006).

In this case, the intent was to facilitate community development through schools. The school was positioned as a community resource, helping to expand networks and leverage available resources. Providers built upon the established range of after school activities for children and used the school to provide specialized services through colocation, codelivery or collaboration (Karayiannis 2006).

Program specifics varied from school to school, depending on available resources, goals, and student population. Some programs were designed to encourage parent involvement while others simply provided a facility to administer other civic services. In all cases, the support of parents was critical to success, as was treating the school as an equal partner with others. While the school serves as the physical center of colocation activities, the site should be thought of as belonging to all parties involved in order to solidify the multiuse commitment (Karayiannis 2006).

BENEFITS

Community-school partnerships have beneficial outcomes on economic prosperity, neighborhood stability, public health, and more. Although colocation is allowed in policy, the practice is not explicitly encouraged (Studio 2014)

Common outcomes of integrated service campuses include increased service at a higher level and less redundancy stemming from the duplication of effort and resources. All this points toward colocation being a more efficient use of funds. Beyond finances and sustainability, implemented colocation projects report increased involvement, engagement and morale across served populations (Haycock 2006).

Wilkin et al. discuss the impact of the extended school, a variation on the community school concept. The study reports a positive impact on pupil attainment, attendance and behavior. Treating the school as a holistic experience increased inclusion and engagement. The multi-agency input was identified as particularly effective in meeting a range of pupil and family needs. The opening of those communication networks was instrumental in removing barriers to attendance and achievement. The school became regarded more as a site of resources, facilities and support for the community as a whole, rather than just a place where children received education (2003).

Teacher workload could be affected in both positive and negative ways. There is potential for increased workload as teachers navigate the multi-use system. In most cases, no specific training is given regarding the extended school approach. Restructuring and additional staff influx reduces the burden on teachers as the school continues to operate.

The short-term burden on teachers is offset by the proximity to additional resources. Specialist support is available on site for dealing with student needs, which is particularly advantageous. Training can be used to raise awareness of opportunities available through other

service providers, leading to increased integration and supplementation of education processes (Wilkin et al. 2003).

Integrated systems also increase the accessibility of school by having additional facilities and services available. The community then benefits from having a base of operations which clusters other organizations and services together. This increases efficiency in service accessibility and delivery. Parents benefit from the services provided, either directly or indirectly, and the community school can increase parental involvement.

There is an intangible benefit associated with community schools as the students receive increased exposure to community members in marginalized groups. This helps build community networks and social capital (Wilkin et al. 2003).

CHALLENGES

While it is understandable that moving social services into the school setting increases the use of those services, both by students and adults, attention also needs to focus on the potential challenges that could be encountered: such as decisions regarding the types of services that should be allowed. Potential integrated civic uses serve a variety of populations. Considering the greatest benefits of colocation are felt at the elementary school level, it is important to note that not all uses will be appropriate for colocation on a campus serving children (Dorn 2010).

Another area that needs careful thought is that of security. In recent years, security has increased dramatically with some schools using metal detectors and other extreme measures to make the educational environment safer. By adding services into schools, more adults will be added to the environment, and the school could become more of an open campus than a secure campus. Questions of access need to be addressed especially in regards to the sharing of instructional space (Dorn 2010).

Challenges with public access go beyond security to include scheduling, school disruption, approachability, and censorship. If there is a conflict in the purpose of the uses, it can severely impact service. This is in part why civic uses may be a better fit for colocation, with the added benefit of leveraging the role of schools to increase approachability for other institutions (Haycock 2006).

POLICY REVIEW

STUDY AREA

Texas was chosen as the study area as a continuation of previous research. Texas has a no income tax, which leads to a unique school funding structure that is based solely on property taxes. There is a tendency to equate property wealthy districts with high-income districts and property-poor districts with low-income districts. Defining property-wealthy districts as rich and property-poor districts as poor creates this confusion. The actuality is more nuanced, as the per-pupil property value depends on how much district homeowners share in the overall tax burden.

Areas with a larger percentage of commercial and industrial properties tend to be lower income, as is the case with districts located in central cities. This means that there are proportionately fewer homeowners to contribute to property tax revenue, but more businesses, which shoulder the majority of the taxation. By contrast, suburban areas tend to be higher income, but have fewer businesses to contribute to the property tax revenue. This is not to say that property and income cannot be correlated, but merely to point out that they might not always be so. The separation of income and property taxes make it easier, in some cases, to parse the relationship between land and usage.

El Paso is located in far west Texas, bordering both New Mexico and Mexico. At the trail end of the Rockies, the Franklin Mountains bisect El Paso with the Rio Grande creating another natural boundary. Three bridges connect El Paso to Juarez, Mexico, and this unique proximity has allowed the El Paso-Juarez region to become the largest bilingual, binational work force in the Western Hemisphere. The combined El Paso, Las Cruces, and Ciudad Juarez metropolitan areas host over 2.7 million people. El Paso also shares space with Fort Bliss, the largest Army base in America.

El Paso is currently served by 4 public independent school districts (ISD). Personal familiarity with educational system in El Paso led to the study selection of Socorro ISD. The school district is representative of broader trend of urban sprawl and urban schools, located on the edge of the city limits. Planned eastern annexations to the city will contribute to the growth of this district in the next decade (Plan El Paso).

The decision to look at colocation in a primarily new build context is not to diminish the importance of pursuing colocation through infill development and rehabilitation. It may be easier to implement colocation onto a blank slate and the ongoing annexation process provides an opportunity to incentivize colocation projects.

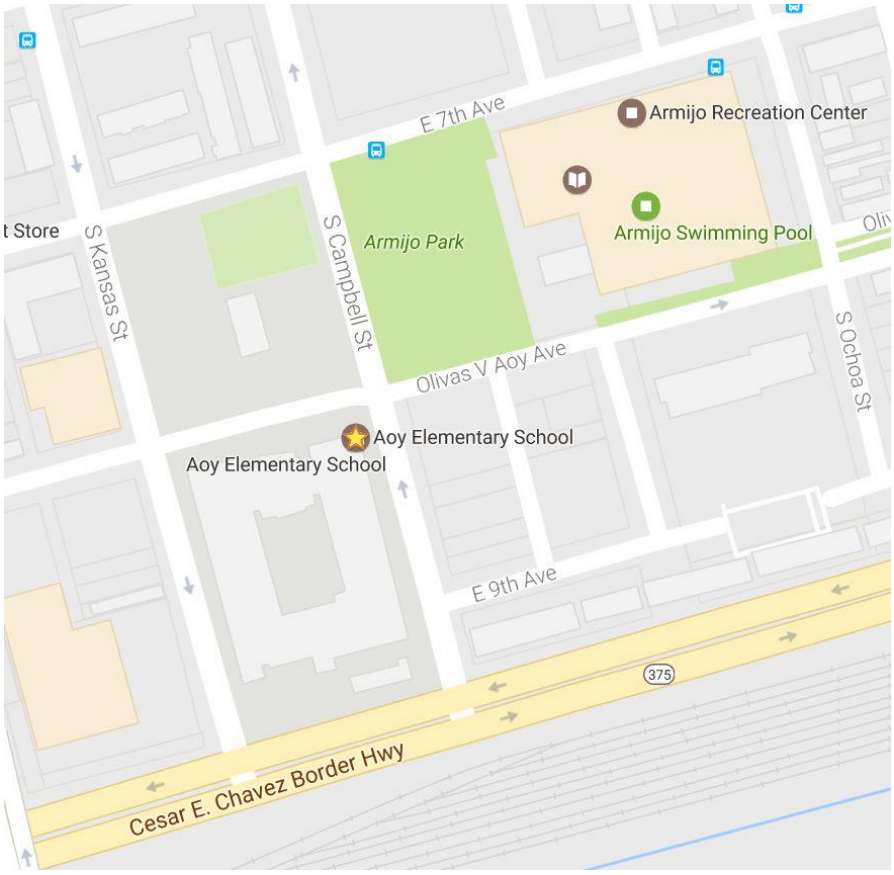
Historically schools were prominently located and accessible by foot or bike, turning them into a major asset and the heart of the neighborhood. El Paso has a rich history in building schools that inspire community pride like El Paso High School, which is prominently located and designed as an impressive architectural monument. In the historic in-town areas of El Paso, schools were embedded within the neighborhood fabric and function as activity centers during and after school hours (Plan El Paso).

EL PASO HIGH SCHOOL

Today many newly constructed schools are suburban in character, located at the edges of neighborhoods. These can be physically inaccessible to pedestrians through the use of fencing and gates, large detention areas, topography changes, and isolated site planning (Plan El Paso).

The redevelopment of Aoy Elementary School in Segundo Barrio is a recent example of a more urban-format, walkable school that functions as the heart of a neighborhood. The school is built within close proximity to other amenities such as Armijo Park, the Boys and Girls Club, and the Armijo branch of the El Paso library and is easily accessible by foot, bicycle, or transit (Plan El Paso).

AOY ELEMENTARY SCHOOL SITE



LEGISLATION

There are different levels of legislations that govern school facilities and siting. The federal Department of Education ultimately oversees public education. At the state level, Title 19 of the Texas Administrative Code covers education requirements. School districts are independent governing bodies run by school boards. The School Board holds power over the curriculum, facilities standards, school siting and funding. Individual school districts can impose additional regulations as long as they remain in compliance with the aforementioned policies.

While not explicitly called such, colocation is allowed under current policy. Title 19 says that it is not the intent of standards to limit the use of nontraditional, alternative, sustainable, and/or innovative school designs. A nontraditional design model is defined as one that works to break down the scale of the school and to improve the connection of the student to the resources available within the school environment (TAC Rule §61.1036). Furthermore, local policy encourages schools to enter into intergovernmental agreements for the shared use of school facilities (Municode 20.10.145).

Under Title 19, school districts are required to have a long-range school facilities plan in place. This plan includes an inventory of existing facilities and conditions, planned improvements and construction, and information related to the provision of service. This includes topics like curriculum, enrollment projections, and teacher hiring. When formulating a plan, a school district's process should allow for input from teachers, students, parents, taxpayers, and other interested parties that reside within the school district (TAC Rule §61.1036).

A colocation framework can be implemented at this stage in concert with the local comprehensive plan. The ability to assess ongoing district and civic projects will help organize future possibilities for both rehabilitation and new construction.

Another requirement for all district projects is a proposal document called the Educational Specifications. This covers logistics like land acquisition, building design, construction, and funding. It also includes information on hiring, enrollment, and instructional programs.

Colocation should also be implemented at this level, whether or not the concept is included in the long-range plan. Part of the Specifications covers the desired relationships for the functions housed at the facility to discuss hours of operation, student safety, and campus security. The level of detail already required by the Educational Specifications lends itself to the incorporation of a joint use agreement into the discussion of service provision (TAC Rule §61.1036).

COMPATIBLE USE MATRIX

In terms of school co-location, it takes time, willingness, and coordination on the part of several parties, including the local leadership and the community. There are many ideas for facilities and services that may, or may not, be appropriate and/or favorable for co-location with schools, such as Parks and Recreation facilities, group homes, day care facilities, shelters, sheriff's facilities, senior citizens' centers, adult education centers, computer centers, and community centers.

Rusek et al. set out to establish a metric to determine the degree of compatibility between public services. The study looked at 30 services in Girona, Spain to create the Municipal Service Similarity Matrix. Analysis was limited to those services provided by the municipal government with an explicit spatial component. Similarity was used as a proxy for compatibility (Rusek et al. 2016).

Seven "features" categories were defined to characterize services. Both binary and relative scales were used, depending on the feature. Expert opinion informed the assigned attribute values. The resulting output compatibility matrix shows a strong match, unsurprisingly, between different school services and shows the compatibility of school and library uses (Rusek et al. 2016).

A variation on this methodology was used to look at compatibility between civic and school facilities in the context of El Paso. Common service types were assessed based on spatial compatibility and additional features to determine the degree of similarity to educational facilities.

The need for variances can be minimized by choosing uses that have similar space requirements and no location restrictions. To address the security and safety concerns, it is best to look at the populations served by each of these uses. It would be unreasonable to colocate a police precinct or public health facility on a school campus. The activity and users of these facilities would make a joint use agreement prohibitively difficult to negotiate.

It should be noted that for all uses, the greatest returns will be felt if colocation occurs with an elementary school. Younger students tend to benefit the most from any gains in educational provision. Elementary schools also require the least additional facilities and have smaller parking requirements.

Compatible Use Analysis

	Library	Office	Recreation	Fields	Parks
Location Restrictions					
Spatial Restrictions					
Parking Requirements					
Population Served					
Governance Level					
Funding Restrictions					

Library facilities, in line with previous research, are the most compatible use. There are no zoning restrictions on siting and library facilities based square footage on percentages. This would allow public libraries to, in some cases, adhere to the more restrictive requirements of the school board. The only issue may arise when it comes to parking requirements, especially at higher grade levels. School parking lots have fairly high space requirements because they have low circulation during the school day. This could impact the accessibility for library patrons. It should be noted that while a school-public library mix would be the most compatible to design, it may be difficult to arrange management and safety.

Office use fits the spatial profile of schools, but it may require flexible zoning, depending on the particular market. The same issue with parking occurs across all uses. If the office space were open to the private sector, it could complicate to colocation potential depending on the client/user base. Civic and governmental offices could more easily locate within a school campus. This would

also mitigate safety concerns as even public government offices have reasonable security protocols in place. Public offices are preferred as they do not require negotiating with private entities who may not be operating at the same local scale. There is also the fact that leasing private office space is dependent on the market which creates an unreasonable level of risk.

Recreation facilities may have zoning and space requirements beyond what can reasonably be accommodated in a community school project. Again, parking may be an issue and certain recreational uses may be administered regionally. There are primarily opportunities for small service facilities on school sites.

Under the parks and recreation umbrella, shared sports fields may be the best option. Because they are linked to specific activities, they can be reserved in advance to limit conflict. At the elementary and middle school level, shared fields may be especially compatible due to the limited sports programming available to younger students. Size is an important consideration. For example, a community park is relatively small, so it is more appropriate to colocate with elementary schools, which are smaller than the other two school types.

Some joint uses may appear compatible, like a high school and regional park, but end up being problematic. In this example, during the spring the park would likely be fully booked by the high school for sports and unavailable for public use. However, there is potential for other co-location efforts with Parks & Recreation.

Depending on the existing green space and parks infrastructure, the colocation of a neighborhood park can be very compatible with school uses. If the local trend is for large open parks instead of a greenspace network, the expected park space may be too large to fold into the school site. There is also the environmental concern that not all sites for development are suitable for parks. Open space tends to also have broader access than recommended for school security.

RECOMMENDATIONS

Co-location of public facilities appears to offer valuable benefits such as resource savings, enhanced synergy of services, possibly even heightened sense of community. In order to make this vision a reality, the first step is to inform and educate potentially involve parties. Increased awareness of colocation possibilities and procedures can help ease the way for colocation projects. The process is made more viable through visibility. Both school districts and local planning departments can use the knowledge of best practices to develop projects and avoid common pitfalls. Education efforts will ensure that opportunities for colocation and joint use are considered and acknowledged.

Since local ordinances defer to school board regulations for site planning, it may be worth pursuing greater flexibility in school board regulations, or at least the possibility for variances. Colocation opportunities may come to light that require a deviation from the school facilities standards and regulations. In these instances, and in all joint use projects, it may be useful to have a framework that allows school boards to assess the space provisions against the potential service efficiency.

In general, it cannot hurt to encourage greater communication between parties involved. There is a tendency to divorce school planning from other ongoing planning efforts due to independent governance. Stronger ties make colocation more possible at all stages and in various iterations. A comprehensive, fully integrated colocation site plan is not the only viable option. There are a variety of colocation projects that highlight a spectrum of integration, with shared campuses at one end of the spectrum and full incorporation of services at the other.

Combining small schools of different levels together to share common facilities like cafeterias, libraries, health clinics, and gymnasiums is one option. Another is to build a one-stop shop style of educational colocation that combines, for example, a pre-school, childcare, learning

resources, community programming space, along with counseling and healthcare. The net benefit of colocation is worth pursuing in concert with other optimization strategies. Joint use and colocation offer an alternative view of school siting that can aid in education provision, build stronger community ties, and reduce building footprints, all of which fits into the paradigm of "good planning".

BIBLIOGRAPHY

Anderson, L., Bustin, A., Cook, K., Davis, K., Mitchell, B., Monnier, S., Perumbeti, K. & Rindge, B. (2014). School Siting & Design Study.

City of El Paso. Code of Ordinances. Title 19-21.

Dorn, R. I. (2010). Analysis of the joint use of public school facilities.

Glaeser, Edward. "Triumph of the city: How our greatest invention makes US richer, smarter, greener, healthier and happier." Pan Macmillan (2011).

Haycock, K. (2006). Dual use libraries: guidelines for success. *Library trends*, *54*(4), 488-500.

Karayiannis, C. (2006). Integrating and partnering services in schools–an emerging model in Northern Ireland. *Support for Learning*, *21*(2), 64-69.

Lees, E., Salvesen, D., & Shay, E. (2008). Collaborative school planning and active schools: a case study of Lee County, Florida. *Journal of health politics, policy and law*, *33*(3), 595-615.

McDonald, N. C. (2010). School Siting: contested visions of the community school. *Journal of the American Planning Association*, *76*(2), 184-198.

McKoy, D., & Vincent, J. (2005). The Center for Cities & Schools: Connecting Research and Policy Agendas. *Berkeley Planning Journal*, *18*(1).

McMahon, E. T. (2000). School sprawl. *Planning Commissioners Journal*, *39*, 16-18.

Minde, J. M. (2008). *Building a framework for a spatial decision support system for co-locating public facilities* (Doctoral dissertation, George Mason University).

Ratner, Gershon M. "New Legal Duty for Urban Public Schools: Effective Education in Basic Skills," Texas law Review 63.777 (1984-1985)

Reeder, David A. “Schooling in the City: Educational History and the Urban Variable.” Urban History 19.1 (1992): 23-38.

Rogers, Bethany. “Review Essay: Integrating Education History and Urban History.” Journal of Urban History 34 (2008): 855.

Rusek, R., Marsal-Llacuna, M. L., Fontbona, F. T., & Llinas, J. C. (2016). Compatibility of municipal services based on service similarity. *Cities*, *59*, 40-47.

“School Facilities and Construction.” 2016. Published by the Texas Association of School Boards (TASB).

Texas State Legislature. Texas Administrative Code. Title 19.

Vincent, J. M. (2006). Public Schools as Public Infrastructure Roles for Planning Researchers. *Journal of Planning Education and Research*, *25*(4), 433-437.

Vincent, J., & Filardo, M. (2008). Linking school construction investments to equity, smart growth, and healthy communities. *Berkeley CA: Center for Cities & Schools at University of California-Berkeley*.

Wilkin, A., Kinder, K., White, R., Atkinson, M., & Doherty, P. (2003). *Towards the development of extended schools*. London: Department for Education and Skills.

Zolnik, E., Minde, J., Gupta, D. D., & Turner, S. (2010). Supporting planning to co-locate public facilities: A case study from Loudoun County, Virginia. *Applied Geography*, *30*(4), 687-696.